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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/658,049	09/08/2000	Ernie Lin	12203-002001	2910

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EXAMINER

TRAN, TUAN A

ART UNIT

PAPER NUMBER

2682

DATE MAILED: 04/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/658,049

Applicant(s)

LIN ET AL.

Examiner

Tuan A Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

1. Claims 1-2 and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Liebenow (6,522,640).

Regarding claims 1-2, Liebenow discloses a base unit (See fig. 4), wherein the base unit is in communication with a telephone line and receives an original signal from the telephone line, the base unit generating an RF modulated signal based on the original signal (See fig. 4 and col. 7 lines 12-24), for transmitting a data signal having substantially no linear distortion (See fig. 2 and col. 3 lines 62-65, col. 5 lines 1-20); and

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a communication card (See fig. 3) which receive the data signal from the base unit over a wireless medium, and which performs echo canceling on the data signal (See fig.2 and col. 3 lines 62-65, col. 4 lines 33-67).

Regarding claim 6, Liebenow further discloses the data signal is transmitted using analog frequency modulation (See fig. 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-5, 7-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liebenow (6,522,640).

Regarding claims 3-4, Liebenow discloses as cited in claim 1. However, Liebenow does not mention that the base unit comprises an AGC for maintaining a peak voltage excursion of combined original and echo signals with linear amplification region of the transmitter. Signal amplifier circuit, having AGC for maintaining a signal amplified in the AGC amplifier circuit within a linear range of the AGC amplifier circuit, is well known in the art, therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the amplifier circuit of the transceiver of the base unit as disclosed by Liebenow, with the signal amplifier circuit, as mention

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above for the advantage of enhancing the feedforward control process to avoid saturation at the amplifier.

Regarding claim 5, Liebenow discloses as cited in claim 1. However, Liebenow does not mention that data signal is transmitted using digital frequency modulation. Since Liebenow suggests to use analog frequency modulation to transmit data (data is digital before converting to analog for transmission) (See fig. 2 and col. 4 lines 58-65) and transmitting data signal using digital frequency modulation is well known in the art, therefore it would be obvious to people skilled in the art to modify the system as disclosed by Liebenow for use in digital frequency modulation for the advantage of expanding the capability of the system to various modulation skims.

Regarding claims 7-8, Liebenow discloses as cited in claim 1, Liebenow further discloses the base unit transmits data signal over a frequency channel of the wireless medium (See col. 5 line 53 to col. 6 line 23). However, Liebenow does not mention that the base unit comprising a circuitry which detects transmission errors, by measuring an error rate based on detected parity bit which is the least significant bit taken form a sample of data signal, and which switches the frequency channel response to the detected transmission error. Since Liebenow discloses the preferable transmission protocol for the system is a spread spectrum frequency hopper-based protocol wherein both the base unit and the communication card hop among channels known to both the base unit and the communication card (See col. 6 lines 24-36) and further transmission error detection, by measuring an error rate based on detected parity bit which is the least significant bit taken form a sample of data signal, is well known in the art; therefore

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it would be obvious to people skilled in the art to modify the system as disclosed by Liebenow such that both the base unit and the communication card will hop among channels known to both based on detected transmission error for the advantage of enhancing signal quality in exchanging data.

Claims 15-18 are rejected for the same reasons as set forth in claims 7-8.

Regarding claim 9, Liebenow discloses as cited in claim 1, but he does not mention that the communication card includes a switch, wherein the switch is triggered by a circuitry when the line present indicator detects a wired medium, for selecting a type of medium over which to transmit and receive the data signal. Since Liebenow discloses the communication card capable of operating in two wireless and wire-line modes (See fig. 2 and col. 4 lines 33-50, col. 5 lines 21-25), it should be necessary to establish a switching circuit to select operation modes based on detection indicating whether or not wired medium interfaced for the advantage of operating the system in the correct mode in accordance to the user's intention.

Claims 10-14 are rejected for the same reasons as set forth in claim 9.

Regarding claim 19, Liebenow discloses a base unit (See fig. 4) and a communication card (See fig. 3) which transmits/receives the data signal to/from the base unit respectively (See fig. 2 and col. 3 lines 62-65, col. 4 lines 33-67). However, Liebenow does not mention that base unit including a hook switch circuit that seizes the telephone line by drawing direct current from the central office battery to provide an indication that the telephone line is ready to transmit data signal. The hook switch circuit, that seizes the telephone line by drawing direct current from the central office

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battery to provide an indication that the telephone line is ready to transmit data signal, is well known in the art; therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the hook switch circuit in the base unit as disclosed by Liebenow for the advantage of enhancing hand-shaking process between the central office and the base unit to obtain channel for data transmission.

Regarding claims 20-22, Liebenow discloses as cited in claim 19, but he does not mention that the communication card includes a switch for selecting a type of medium over which to exchange data signal with the base unit. Since Liebenow discloses the communication card capable of operating in two wireless and wire-line modes (See fig. 2 and col. 4 lines 33-50, col. 5 lines 21-25), it should be necessary to establish a switching circuit to select operation modes for the advantage of operating the system in the correct mode in accordance to the user's intention.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ide et al. (5,955,921) discloses signal amplifier circuit.

- Ohmagari et al. (5,553,318) discloses transmitter having envelope feedback loop and automatic level control loop.
- Bergmans et al. (4,835,765) discloses arrangement for full-duplex data transmission over two-wire circuit.
- Brooks (4,171,469) discloses abbreviated dialing system.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Tuan Tran** whose telephone number is **(703) 605-4255**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Vivian Chin**, can be reached at **(703) 308-6739**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.



Tuan Tran

AU 2682

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4/2/03